In the Claims:

Claims 1 to 16 (Canceled).

17. (Previously presented) An acceleration sensor arrangement comprising:

a frame;

plural inertial masses; and

a respective set of two torsion spring elements respectively suspending each respective one of said inertial masses from said frame, whereby said two torsion spring elements of each said respective set are aligned with one another on a respective reference plane parallel to a surface of said respective inertial mass when said respective inertial mass is at rest without being deflected, so that said two torsion spring elements form a respective torsional pivot axis about which said respective inertial mass is pivotable;

wherein each said respective inertial mass is respectively suspended asymmetrically by said respective set of two torsion spring elements associated therewith, so that a respective center of gravity of said respective inertial mass is offset by a first offset distance (b) from said reference plane and is offset by a second offset distance (a) from a respective second plane that extends perpendicular to said reference plane along said respective torsional pivot axis of said respective inertial mass; and

wherein said respective inertial mass is respectively configured and arranged, and an offset angle (ϕ) is defined so that the trigonometric tangent function of said offset angle is given by said first offset distance divided by said second offset distance ($\tan \phi = b/a$), and said offset angle (ϕ) is greater than 20 degrees.

18. (Previously presented) The acceleration sensor arrangement according to claim 17, wherein said plural inertial masses include at least three of said inertial masses that are each configured identically to one another and that are arranged with one another in a rectangular pattern.

19. (Previously presented) The acceleration sensor arrangement according to claim 17, further comprising a first cover plate arranged on a first side of said frame spaced by a first gap from said inertial masses.

20. (Previously presented) The acceleration sensor arrangement according to claim 19, further comprising a second cover plate arranged on a second side of said frame opposite said first side and spaced by a second gap from said inertial masses.

21. (Previously presented) The acceleration sensor arrangement according to claim 19, further comprising at least one conductive area respectively arranged on said first cover

plate, located opposite and facing toward each said respective inertial mass across said first gap, to form a variable capacitance between said at least one conductive area and said respective inertial mass dependent on a spacing distance between said at least one conductive area and said respective inertial mass across said first gap.

22. (Previously presented) The acceleration sensor arrangement according to claim 17, characterized in that a measurement of a deflection of each said respective inertial mass (3a-d) is enabled by a differential capacitive measurement arrangement.

23. (Previously presented) The acceleration sensor arrangement according to claim 17, further comprising a lower cover disk (7) and an upper cover disk (9) with said frame received therebetween for sealing and for protection against environmental influences.

24. (Previously presented) The acceleration sensor arrangement according to claim 23, further comprising metallized surfaces (10a-d) that are isolated from one another and are structured on the upper cover disk (9) close to the respective torsional pivot axis defined by the respective torsion spring element (4a-h) for enabling a differential capacitive measurement of a deflection of each said respective inertial mass.

25. (Previously presented) The acceleration sensor arrangement according to claim 24, wherein the metallized surfaces (10a-d) are arranged symmetrically to the torsional pivot axis defined by the respective torsion spring element (4a-h).

26. (Previously presented) The acceleration sensor arrangement according to claim 17, further comprising a deflection measurement device including a capacitive arrangement arranged so as to sense a deflection of each one of said inertial masses about said respective torsional pivot axes.

27. (Previously presented) The acceleration sensor arrangement according to claim 17, wherein said inertial masses are arranged so that said acceleration sensor arrangement is sensitive to acceleration forces along three orthogonal force axes.

28. (Previously presented) The acceleration sensor arrangement according to claim 17, wherein said torsional pivot axes of said inertial masses are respectively oriented offset from one another by integer multiples of 90 degrees.

29. (Previously presented) The acceleration sensor arrangement according to claim 17, wherein said respective reference planes of said inertial masses all lie on one common

reference plane when said acceleration sensor arrangement is at rest without said inertial masses being deflected.

30. (Previously presented) The acceleration sensor arrangement according to claim 17, wherein each said respective inertial mass is configured and arranged about said torsional pivot axis thereof to have a respective main sensitivity axis perpendicular to said reference plane thereof.

31. (Previously presented) The acceleration sensor arrangement according to claim 17, wherein said offset angle (ϕ) is 45°.

32. (Previously presented) The acceleration sensor arrangement according to claim 17, wherein said frame includes an outer frame bounding an outer perimeter of said acceleration sensor arrangement and an inner divider frame that divides an inner space of said outer frame into plural cells in which said inertial masses are respectively received, and each said respective set of two torsion spring elements includes an outer torsion spring element connecting said respective inertial mass to said outer frame and an inner torsion spring element connecting said respective inertial mass to said inner divider frame.

33. (Previously presented) An acceleration sensor arrangement comprising:

a frame;

plural inertial masses; and

a respective set of two torsion spring elements respectively suspending each respective one of said inertial masses from said frame, whereby said two torsion spring elements of each said respective set are aligned with one another to form a respective torsional pivot axis about which said respective inertial mass is pivotable;

wherein each respective one of said inertial masses is respectively suspended asymmetrically by said respective set of two torsion spring elements associated therewith, so that a respective center of gravity of said respective inertial mass is offset from said respective torsional pivot axis of said respective inertial mass in two orthogonal directions; and

wherein said frame includes an outer frame bounding an outer perimeter of said acceleration sensor arrangement and an inner divider frame that divides an inner space of said outer frame into plural cells in which said inertial masses are respectively received, and each said respective set of two torsion spring elements includes an outer torsion spring element connecting said respective inertial mass to said outer frame and an inner torsion spring element connecting said respective inertial mass to said inner divider frame.

34. (New) The acceleration sensor arrangement according to claim 17, wherein said offset angle (Φ) is at least 21°.

35. (New) The acceleration sensor arrangement according to claim 17, wherein said frame, said inertial masses and said torsion spring elements consist of silicon.

36. (New) The acceleration sensor arrangement according to claim 33, wherein:

said center of gravity being offset from said torsional pivot axis of said respective inertial mass in said two orthogonal directions establishes an offset angle between a reference line and a reference plane,

said reference line extends from said torsional pivot axis to said center of gravity,

said reference plane extends parallel to a major surface of said respective inertial mass and through said pivot axis, and

said offset angle is greater than 20%.

37. (New) The acceleration sensor arrangement according to claim 36, wherein said offset angle is at least 21°.

38. (New) The acceleration sensor arrangement according to claim 36, wherein said offset angle is 45°.

39. (New) The acceleration sensor arrangement according to claim 36, wherein said frame, said inertial masses and said torsion spring elements consist of silicon.

[RESPONSE CONTINUES ON NEXT PAGE]